Dell OpenManage Network Manager version 5.2
Service Pack 1
Quick Start Guide

Notes, and Cautions

A NOTE indicates important information that helps you make better use of your computer or software.

A CAUTION indicates potential harm to your data or hardware if you proceed as indicated.

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Quick Start

QuickStart Introduction

The following sections outline the steps to install a typical Dell OpenManage Network Manager system and its subsequent first use. Because the software described here is both powerful and flexible, this quickstart cannot describe all the details of available installations. Instead, this Guide refers to those descriptions elsewhere or in online help. It also includes a "Pre-Flight" Checklist, below. A typical installation includes the following:

- Installing and System Startup
- Configuring Dell OpenManage Network Manager Users
- Discover Your Network
- Resource Management
- Configuration Management
- Fault Management - Problem Diagnosis
- Performance Management - Troubleshooting
- Create Reports
- Collaborative Diagnosis

NOTE:

Before you begin installing Dell OpenManage Network Manager, make sure your hardware and network are correctly configured. For more about that, see Getting Started on page 27 of the Dell OpenManage Network Manager *User Guide*

"Pre-Flight" Checklist

Installation

❑ **Installation host:** Log in as an administrative user. An administrative user can write to the installation target directory. Do *not* log in with a user name that is *Administrator* on Windows XP or a name that contains spaces. Also: You must have root access to install on UNIX, but do not install as user *root*.

❑ **Remove Firewall barriers:** Remove firewall barriers between hosts and/or between your installatin and Monitored Devices. Best practice is to take down the firewall, install the application, then put it back up.

❑ **Directories:** The source directory should not be the same as installation target directory

❑ **MySQL:** Some Linux packages include MySQL by default. Uninstall any existing MySQL if you are using that database with OpenManage Network Manager.

❑ **Fixed IP Address:** OpenManage Network Manager requires a static IP address.

Starting OpenManage Network Manager (After installation)

❑ **Host Login:** Do not start application when logged in as *root* or *dorado*.

❑ **Database Running, Connected:** Make sure your database is running. MySQL installs automatically as a service.

❑ **Start Application Server:** If you installed OpenManage Network Manager as a service, right-click the procman icon (in the tray), or the startappserver icon, and start application server. The Windows tray icon may prematurely indicate application server has started. Workaround: Wait a little, and the application server will catch up to the icon.

When initiated from the tray icon, startup changes its color from red to yellow to green, when complete. Once the icon has turned green, the web client may display the message ""The Dell OpenManage Network Manager server is currently starting up. This page will refresh when the Dell OpenManage Network Manager server has fully started." This message indicates the Dell OpenManage Network Manager application server requires extra time to start. When the message does occur connect the web browser again after a few minutes.

Login: Default login is *admin*, password *admin*.

Discovery (After startup)

❑ **Connectivity:** Insure application server has connectivity to devices to discover. One easy way to do this is to ping the discovery target from application server.

❑ **Device Login/Passwords:** Needed for discovery targets. Typically these include SNMP communities and CLI login / password combinations.

❑ **Device Access:** Insure OpenManage Network Manager's host is authorized to manage to the device(s). Configure devices' ACLs to admit this application's access / management.

Backup / Restore / Deploy (After device discovery)

❑ **FTP Server:** Make sure an external FTP server is running and has network access to the target device(s). Typically FTP servers must be on the same side of firewalls as managed devices. OpenManage Network Manager's internal FTP server is for testing only.

Alarms / Monitoring

❑ **Minimize Network Traffic:** Configure "chatty" devices to quiet down. Use *Suppress Alarms* to keep performance at acceptable levels, and database archiving so the database does not fill up.

Licenses and Upgrades

IMPORTANT: Dell OpenManage Network Manager 5.2 can only be installed as an initial install or upgraded from version 4.4. In general, we strongly recommend installing OpenManage Network Manager 5.2 as an initial install. If you are running OMNM 4.3 or earlier version, you should uninstall OMNM in order to install OMNM 5.2 on the same system. If you are running OMNM 4.4 and choose to upgrade, OMNM will change and migrate only a limited amount of data from to version 5.2. This results in some data and settings being changed or no longer accessible. Refer to the User Guide and Release Notes for additional information.

If you choose to install OMNM 5.2 as an upgrade from OMNM 4.4, you can continue to manage previously discovered devices after reinstalling your license key. However, you will be required to update your OMNM 4.4 license to an OMNM 5.2 license to enable the new OMNM 5.2 features. If after an upgrade you have more than 10 devices discovered, you will only be able to remove devices and not be allowed to add any device until your OMNM 4.4 license has been converted to OMNM 5.2 license format. This can be done by contacting your sales representative or going to http://www.doradosoftware.com/dell/upgrade-info.html. Refer to the User Guide and Release Notes for additional information. There is no charge for updating your OMNM 4.4 to the OMNM 5.2 license format. Also, see Installing Licensing on page 55 or see How to: Register a License on page 59 of the User Guide for instructions about installing licenses.

Recovering licenses—Dorado Software can provide licenses to replace any lost or misplaced licenses on request. This can be done by contacting your sales representative or going to http://www.doradosoftware.com/dell/upgrade-info.html. Refer to the User Guide and Release Notes for additional information.

You can contact the Sales rep that provided the license, contact Dorado Software or call the the Dorado Software help desk, or submit a trouble ticket requesting a license upgrade.

When you license new features, you must restart the application server.

Installing and System Startup

Initiate installation by executing `win_install.exe` (Windows), or linux_install (Linux). Click through the installation wizard, accepting the license and making the appropriate entries.

During installation, one screen lets you select the application's memory size. Best practice is to select the largest available after 1 - 4 GB is set aside for the operating system.

Tip

You can re-set the selected memory size after installation too, with the following properties in \owareapps\installprops\lib\installed.properties:

```
oware.server.min.heap.size=1024m
oware.server.max.heap.size=1024m
```

When you have installed and successfully deployed Dell OpenManage Network Manager, you can continue to the next steps. See Installation and Startup on page 28 of the Dell OpenManage Network Manager *User Guide* for step-by-step instructions for a typical installation. For more complex installations, consult the OpenManage Network Manager's Administration Section of the User Guide.

Finally, you must do the following to see Dell OpenManage Network Manager:

1 If you did not install it as a service, manually start application server. You can use the *Start* > *Programs* > *Redcell* menu in Windows, or simply type `startappserver` in a command shell.

If it is installed as a service, and the tray icon is red, right-click that icon and select *Start*. Application server monitors your network even when the client is not running.

2 If it is not already running, start the web server. Right-click the tray icon for web server and select *Start service*.

NOTE:

On Linux start (or stop) the webserver with scripts startportal.sh start (or startportal.sh stop) located in the oware/synergy/tomcat-x.x.x/bin directory.

3 To see the client interface, open a browser, and enter this in the URL field:

```
http://[hostname or host IP address]:8080.
```

4 Log in for the first time as *admin* (password *admin*).

5 Dell OpenManage Network Manager should appear with the standard set of page configurations for your package. You can typically reconfigure these defaults. See the *User Guide* for guidance about how to do that.

NOTE:

Instead of `oware`*, in Unix systems type* `. /etc/.dsienv` *—[dot][space]/etc/[dot]dsienv)*

Configuring Dell OpenManage Network Manager Users

As an Administrator, you can configure Users, and Roles to identify support teams (examples: administration, engineering and operations) and configure permissions. After creating them, add Users to roles which configure their permissions for access and action. The following describes how to do this.

How To:

Add Users and connect them to Roles

Add Users with the following steps:

1. Click *Go to* > *Control Panel* and navigate to Portal > Users and Organizations.
2. Click the *Add* > *User* menu item at the top of the *Users and Organizations* screen.
3. Enter the details of the new user. If you are editing an existing user, more fields appear. *Screen Name*, and *Email Address* are required. Optionally, you can enter *Name*, *Job Title*, and so on.
4. After you click *Save* notice that the right panel expands to include additional information. Make sure you specify a *Password*.
5. Notice that if you are editing an existing user, or creating a new one, you can use the links on the right to configure connections with *Roles*. Roles, in particular, configure the OpenManage Network Manager functional permissions for that user. For example the group of *Operators* would likely have more limited capabilities than *Administrators*.
6. Click *Save* again, and the user you just configured should appear listed in the *Users and Organizations* screen when you select *View* > *All Users*.
7. To assign a user to a role, click *Action* > *Permissions* and check the appropriate box next to the role. Configure OpenManage Network Manager functional permissions for these roles in Roles.

How To:

Add and Configure User Roles / Permissions

Add and configure User Roles with the following steps:

1. Click *Go to* > *Control Panel* and navigate to Portal > Roles.
2. Click the *Add* tab under the heading at the top of the page, and select Regular *Roles*. Notice that you can also add roles that configure permissions for sites and organizations.
3. Enter the details of the new role (*Name*, *Title*, *Description*), then *Save* it.
4. Click Portal > Roles' *View All* button to see a list of available roles, including the one you added.
5. By clicking the *Action* icon to the right of any listed Role, you can also select the role's permissions to alter web portal access in a subsequent screen.
6. Click *Add* to add permissions. Click the checkboxes to enable the type of permission desired.
7. To do more with Dell OpenManage Network Manager's functional permissions, go to the Redcell > Permission Manager, and click to open this screen.

8 The Role to Permission mapping screen appears. Click the *Edit* button to the right of listed Roles to see and configure available permissions.

9 Click *Advanced* to see available permissions organized by *Read*, *Write*, *Execute*, *Add* or *Delete* actions.

10 After you have selected permissions, click *Apply* to accept them and add them to the role.

Notice that you can revisit this role, manage it and its membership with the *Action* button to the right of the role. You can also add users to the group by selecting and editing that user.

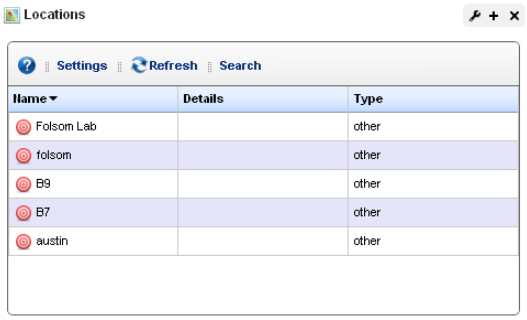
How To:
Add Locations

Locations let you manage and view your network by location or branches. To add locations, follow these steps:

1 Find the Locations portlet (typically on the Admin pages).

2 Right-click anywhere in the Locations portlet, and click *New*.

3 Click Save after entering all required details to save new location.



Tip

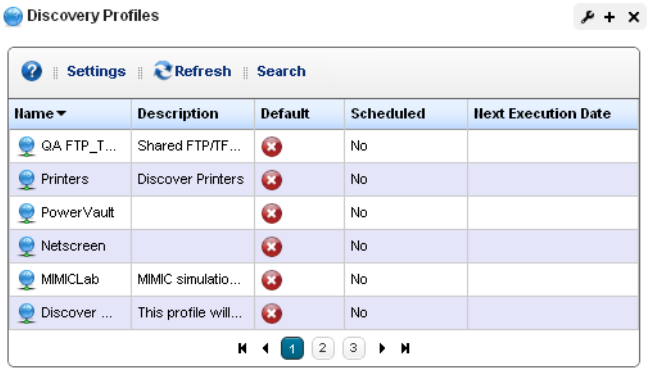
To see a portlet in Expanded rather than Summary mode, click + in the upper right corner.

How To:
Discover Your Network

To begin managing resources in your network, you must discover them to store their information in the application database. This begins either with the *Resource Discovery* Quick Navigation button or the *Discovery Profiles* portlet.

Discovery profiles configure equipment discovery for Dell OpenManage Network Manager.

The summary view displays the *Name*, *Description*, *Default* (the green check indicates the default profile), whether the profile is *Scheduled* and *Next Execution Date* for scheduled discovery. Follow these steps to start discovering equipment on your network.



1 Click the *Resource Discovery* button in Quick Navigation or right-click the Discovery Profiles list and select *New*. (If you have previously exported profiles, you can *Import* them. You can also *Export Selection*, or *Export all* profiles in this manager. *Open* an existing profile to edit it.)

2 After this beginning, if you clicked the *Resource Discovery* button, the Quick Discovery screen appears where you can enter device identifiers (typically IP Address(es)), and authentications, then execute discovery. The Quick Discovery screen can also discover the default Discovery profile if you have configured one already.

   If you clicked *New* in the Discovery portlet, the Discovery Profile Editor appears, with a step-by-step set of screens to configure resource discovery, as described below.

   You can navigate through the Profile Editor by clicking the screen tab names at the top, or by clicking the *Next* button at the bottom of the page.

Discovery Profile Editor

Use this editor to configure discovery. Baseline discovery is the initial discovery to compare to later discoveries. Follow these steps to discover equipment on your network:

General

3 **General Parameters**—Set the *Name*, *Description* and whether this profile is the baseline default.

4 **Profile Options**—Select the *Device Naming Format* (how the device appears in lists, once discovered), whether to *Manage by* IP address or hostname, and check whether to *Resolve Hostname(s)*, *ICMP Ping Device(s)*, *Manage ICMP-only Device(s)*, or *Manage Unclassified Device(s)*. This last checkbox determines whether Dell OpenManage Network Manager attempts to manage devices that have no device driver installed. Management may be possible, but more limited than for devices with drivers installed, provided this capability is one you have licensed.

The Filters (by *Location*, *Vendor*, or *Device Type*) let you narrow the list of devices discovered by the selected item(s). As the screen says, this filtering will not have any impact on the processing that occurs during the Inspection step.

CAUTION:
Model numbers may change when you upgrade. You may need to change any pre-existing filters that refer to model numbers. These may not change until you perform a resync on some devices.

Network

5 After you click *Next*, the *Network* screen appears.

Network Type and Addresses—Select the type of entry in the pick list (*IP Address(es)*, *CIDR Address*, *Hostname*, *SNMP Broadcast*, *Subnet*).

Tip

You can specify an IP Address range by separating the beginning and end with a dash. For example: 192.168.1.1 - 192.168.1.240.

The tooltips in the data entry field describe what valid entries look like.

6 **Authentication**—You can *Create new*, or *Choose existing* authentications. (See Discovery Profiles on page 65 for details.) Notice that authentications appear with *Edit / Delete* icons and *Up / Down* arrows on their right. The *Edit* icon opens the authentication editor. Click the arrows to arrange the order in which credentials are tried (top first). Ordering only applies when two credentials are of the same type.

Actions

7 You can configure Actions to run as part of discovery. By default, the actions screen includes the *Resync* action. Use *Add Action* to select others to enter here. You can also edit parameters (if available), delete and re-order the actions listed here by clicking the icons to the right of them. Dell OpenManage Network Manager executes them in top-to-bottom order.

Inspection

8 **Inspect Network using your current settings**—This screen lets you preview the discovery profile's actions and access to devices. If you clicked *Next* rather than *Inspect* at the bottom of the previous screen, click *Start Inspection* to begin the inspection process for selected authentications that validates the device's credentials.

Notice that the *Auth Test Status* fields below listed authentications indicates the success or failure of Ping, Hostname resolution, and the listed Authentications.

If the device does not match all required authentications, you can click the *Fix it* icon (wrench and screwdriver crossed) to edit them for the selected device. You can also click *Test Device*, *Create New*, or *Choose Existing* authentications while in the editor clicking the *Fix it* icon displays.

When authentications are unsuccessful, you can remove or edit them in this editor too. Click the icons to the right of listed authentications to do this.

9 **Save—**Click *Save* to preserve the profile. You can then right-click it to select *Execute* and begin discovery. If you select *Execute* from the profile editor, Dell OpenManage Network Manager does not save the profile to execute later.

Results

10 **Execute**—Clicking *Execute* begins discovery, and the message traffic between Dell OpenManage Network Manager and the device appears on the *Results* screen.

This is a standard *Audit* screen. See Audit Trail / Jobs Screen on page 91 for more about it.

11 A message (*Discovery Profile Execute is complete*) appears in the *Messages* at the bottom left of the status bar.

Tip

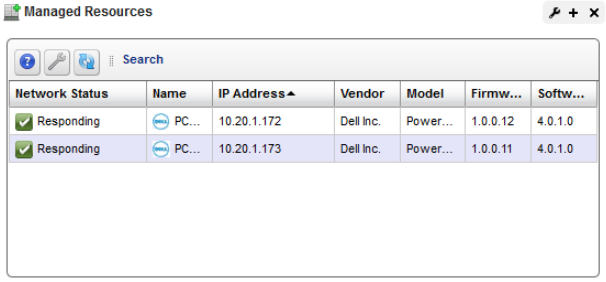
You can also schedule discovery profiles to run periodically, updating your Dell OpenManage Network Manager database with any network changes. For more, see Schedules on page 95.

12 The devices in your network now appear in the Resource Management portlet, and elsewhere (in Topology, for example).

Resource Management

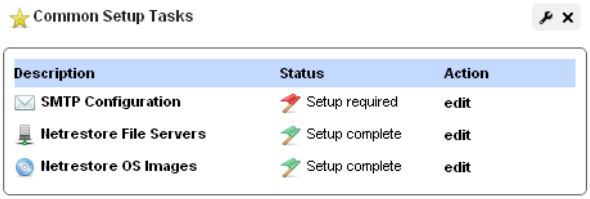
The Managed Resource portlet displays all the devices you have discovered.

Right-clicking a listed resource displays a menu with options described in Managed Resources on page 166 of the *User Guide*.



Common Setup Tasks

This portlet appears on the first page after you sign in, and reminds you of the following common tasks:



- SMTP Configuration—This configures how Dell OpenManage Network Manager sends notification e-mails.

Netrestore File Servers—See Configure an FTP/TFTP Server setup instructions below, or its description in File Server Editor on page 222 of the Dell OpenManage Network Manager *User Guide*.

A red flag appears with the "Setup required" message in the *Status* column when these are not configured. Configuring them displays a green flag with the "Setup complete" message. Click the *edit* link in the *Action* column to open editors for each of these.

Quick Navigation

The Quick Navigation portlet lets you quickly click some links to basic tasks:

Resource Discovery—Discover devices in your network with the Quick Discovery defaults, or lets you construct a Quick Discovery profile if none exists. See Resource Discovery on page 152 for details.

Link Discovery—After you have discovered resources, this discovers their connections. See Link Discovery on page 176.

Backup Config Files—This lets you back up discovered devices' configuration files. Before you can use this feature, you must have servers configured as described in File Servers on page 221. See also File Management on page 223 of the *User Guide*.

OS Image Upload—Upload firmware updates for devices. See Firmware Image Editor on page 235 for more about these capabilities.

Deploy OS Image—This deploys firmware updates. To deploy images, you must have File Servers configured, as described above for Backup. See Deploy Firmware on page 238.

License Management—This lets you see, update and manage the licensed capabilities of Dell OpenManage Network Manager. See License Viewer on page 63 of the *User Guide* for details.

Configuration Management

Dell OpenManage Network Manager lets you manage device configurations. Before you begin that management, you must first configure an Configure an FTP/TFTP Server to get or send such configurations from / to devices. After configuring the Configure an FTP/TFTP Server, you can do Do Configuration File Backup / Restore described below.

How To:

Configure an FTP/TFTP Server

Follow these steps to configure a server:

1. Click either the Common Setup Tasks portlet's Netrestore File Servers link, or right click and select *New* in the File Servers portlet.
2. After entering all required details click *Save* to save new file server.
3. Optionally click *Test* to validate the new file server is working.

How To:

Do Configuration File Backup / Restore

Provided you have permissions, you can backup configuration file(s) for a single device or group of devices, either on demand or as scheduled. Follow these steps:

1. In the default Dell OpenManage Network Manager screen layout, go to the Configuration Management > Summary page.
2. In the Managed Resources portlet, select (click on) a Managed Resource of interest.
3. Right-click on selected resource in the Managed Resources portlet, and then click *File Management* > *Restore* or *Backup*. See File Management on page 223 of the *Synergy User Guide* for more details.
4. Enter the information needed to create the backup or restoration.
5. Optionally click *Add Schedule* to schedule the backup task. See Schedules on page 95 of the *Synergy User Guide* for details.
6. Click *Execute* to immediately do backup or *Save* to save the configured backup to run later.

How To:

Restore a single configuration to many target devices

The following steps describe restoring a single configuration to many discovered devices without overwriting those devices' essential information.

1. Back up a single device's configuration that is nearest to the kind you would like to see generally.
2. Right-click this backed up file in the File Management portlet, and *Promote* it so it appears in the Image Repository portlet.
3. Right-click > Edit the promoted configuration in the Image Repository.
4. Name the file, and, if necessary, configure a filter In the *General Parameters* tab of the editor.
5. In the *Configuration* tab, locate the parameters you want to preserve in discovered devices when you restore this file. This can include items like the device's DNS Hostname, IP Address, and so on. Delete the file's specifics and double-click to insert the *Target Params* in place of these variables.
6. Save the configuration.
7. Right-click to deploy this configuration.
8. You can check *Generate and save for configuration only* if you simply want to configure deployment for later, and save for now. You can also optionally name a label for the deployed files.
9. Select the devices, or groups of devices to which you want to deploy.
10. Click *Save*, *Execute* or *Add Schedule* depending on your desired outcome.
11. If you click *Execute*, you will have to confirm this action.

    When Dell OpenManage Network Manager performs the restoration (deploy), it reads the Target Params from those discovered for each device, inserts those in the config file, then restores it, device by device, skipping any that do not pass the filter set up in step 4.

Fault Management - Problem Diagnosis

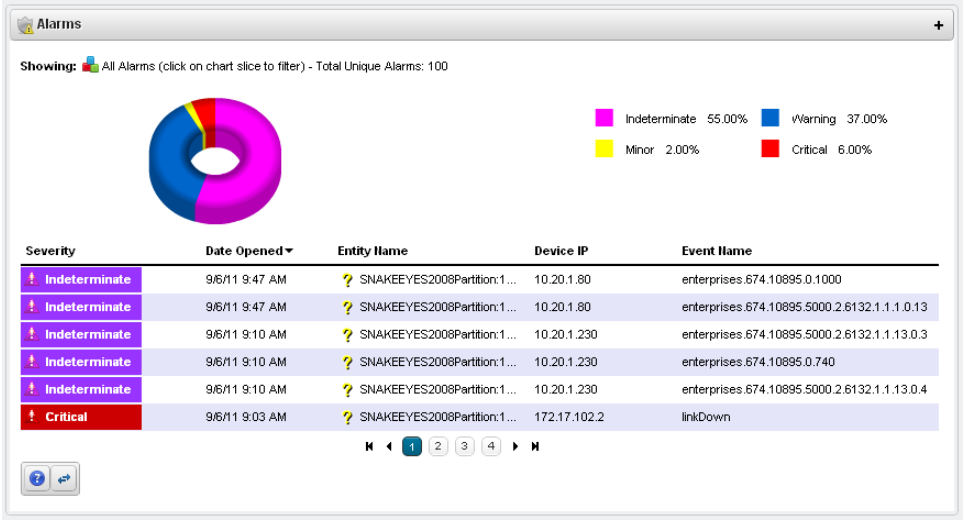
Dell OpenManage Network Manager lets you diagnose network problems with its Alarms viewer, and lets you monitor performance with its Performance Management - Troubleshooting capabilities, as described below. The following briefly outlines these capabilities

Alarms

Alerts about network performance issues can include alarms about the following:

- Excessive interface utilization
- Unexpectedly high CPU load
- Loss of available memory
- Slow response time

- Excessive interface errors


Alarms
Showing: All Alarms (click on chart slice to filter) - Total Unique Alarms: 100
Indeterminate 55.00%
Warning 37.00%
Minor 2.00%
Critical 6.00%
Severity
Date Opened
Entity Name
Device IP
Event Name
Indeterminate 9/6/11 9:47 AM SNAKEEYES2008Partition:1... 10.20.1.80 enterprises.674.10895.0.1000
Indeterminate 9/6/11 9:47 AM SNAKEEYES2008Partition:1... 10.20.1.80 enterprises.674.10895.5000.2.6132.1.1.1.0.13
Indeterminate 9/6/11 9:10 AM SNAKEEYES2008Partition:1... 10.20.1.230 enterprises.674.10895.5000.2.6132.1.1.13.0.3
Indeterminate 9/6/11 9:10 AM SNAKEEYES2008Partition:1... 10.20.1.230 enterprises.674.10895.0.740
Indeterminate 9/6/11 9:10 AM SNAKEEYES2008Partition:1... 10.20.1.230 enterprises.674.10895.5000.2.6132.1.1.13.0.4
Critical 9/6/11 9:03 AM SNAKEEYES2008Partition:1... 172.17.102.2 linkDown
1 2 3 4

When you receive an alarm you can take any of the following action on the alarm itself, or the target of the alarm:

- Assign User
- Acknowledge Alarm
- Unacknowledge Alarm
- Clear Alarm
- Show Performance

Follow these steps to get started:

1 Click to go to the *Alarms* page from the default screens.

2 In the Alarms portlet, click on an Alarm of interest.

Tip

If your Alarms portlet displays a graph of different alarm types, clicking on s particular alarm severity filters the list below to only display that severity. Click again to undo the filter effect.

3 Right-click on the selected alarm, and then click *Acknowledge Alarm* to take ownership of the alarm.

4 Right-click then click *Assign User* to select a user owner for the alarm.

5 Right-click then click *Clear Alarm* to remove the alarm from list.

6 Click the plus (+) in the upper right corner of the Alarms portlet to go into Expanded mode where you can view more details about an alarm.

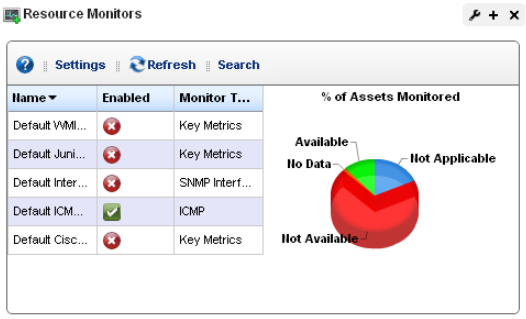
Performance Management - Troubleshooting

In addition to troubleshooting faults, you can also monitor device performance with Dell OpenManage Network Manager.

Monitors

Monitors display some critical performance metrics for devices on the network, including:

- Network availability
- Bandwidth capacity utilization
- Buffer usage and errors
- CPU and memory utilization
- Interface errors and discards
- Network latency
- Node and interface status



To get started using monitors, follow these steps:

1. Click the Performance Management > Summary page, and find the Resource Monitors portlet on that page.
2. Hover the cursor over a Monitor of interest to see a tooltip of details about it.
3. Click to select a Monitor of interest.
4. Right-click the selected monitor in the Resource Monitors portlet, and then click *Open* to edit its details, including enabling/disabling it.

Dashboard Views

With permissions, you can view the performance data collected by the monitors, in graphical and tabular form including:

- Excessive interface utilization
- Unexpectedly high CPU load
- Loss of available memory
- Slow response time
- Excessive interface errors

To view this data, follow these steps:

1. Click the Performance Management > Summary page and find the Top Problem Nodes portlet. (

2 Hover the cursor over a Device/Interface of interest to see a tooltip of details about its status.

3 Right-click and select *Show Key Metrics*, or *Show Performance* which opens a dashboard.

How To:
Create Reports

If your want to automate month-end reports Dell OpenManage Network Manager lets you schedule either recurring reports or a single scheduled occurrence. With the correct permissions, you can run Inventory Reports on demand or as scheduled. You can use the Reports to troubleshoot and monitor performance and historical data that has been collected during the operation of the network.

1 Find the Reports portlet.

2 Click to select a Report of interest.

3 Right-click, and then click *Execute* to run report

4 Report generation runs in the background. When it is complete, you a message appears in the *Messages* tab at the bottom left corner.

5 Click on Messages tab to open, then click on the Report of interest and click on the View Details icon at the right end of entry, to view completed report.

Collaborative Diagnosis

Once Dell OpenManage Network Manager notifies you about a network problem with Fault Management - Problem Diagnosis or Create Reports, you can consult with other network experts through Dell OpenManage Network Manager's built-in chat system. You can even meet online with more than one user, and share the problem report, or alarm. See Status Bar Alerts on page 75 and Sharing on page 87 of the Dell OpenManage Network Manager *User Guide* for the specifics about how to do this.

Some examples of easy solutions provided by chat:

- You cannot use an FTP server. Asking a coworker with Dell OpenManage Network Manager's chat reveals it is out of commission. Because you can share specific servers as a chat attachment, there's never a question about which server you are discussing.
- Confirm the format of a report. Again, attaching the report to chat lets coworkers see exactly what you are talking about, and quickly.
- You can similarly attach schedules to chat to make sure everyone agrees they are correct.
- What you can do with a single chat session is also true of Dell OpenManage Network Manager's "conferences" which amount to collaborative chat sessions, attended by more than one other person.